



Evergreen Resources Management
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Wilmington, DE 19803

August 31, 2020

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Ms. Chelsea Fazzino, P.G.
Pennsylvania Department of Environmental Protection
2 East Main Street
Norristown, Pennsylvania 19401

**RE: Groundwater Remediation Status Report, First Half 2020
Marcus Hook Refinery Operations, a series of Evergreen Resources Group, LLC**

Dear Ms. Fazzino,

The former Sunoco, Inc. (R&M) (Sunoco) Marcus Hook Refinery (refinery) was officially entered into the Pennsylvania One Cleanup Program in November 2011. This First Half 2020 Groundwater Remediation Status Report for the facility was prepared to summarize work completed in support of the Work Plan for Site Wide Approach under the Pennsylvania One Cleanup Program (SWAWP) submitted to the Pennsylvania Department of Environmental Protection (PADEP) and the United States Environmental Protection Agency (USEPA) on December 19, 2011. The Corrective Action Framework (CAF) for the RCRA Facility Investigation/Remedial Investigation of the former Marcus Hook Refinery was developed from 2014 through 2017 with input from the USEPA and PADEP. The CAF replaces the SWAWP as the article guiding the conclusions and recommendations resulting from the facility environmental investigations.

Sunoco previously operated the facility located at 100 Green Street in Marcus Hook, Pennsylvania (the Marcus Hook Property). The Marcus Hook Property was transferred to Sunoco Partners Marketing & Terminals L.P. (SPMT) on April 1, 2013 and the current facility is referred to as the Marcus Hook Industrial Complex (MHIC). As of December 30, 2013, Marcus Hook Refinery Operations, a series of Evergreen Resources Group, LLC (Evergreen), assumed the responsibility for remediation liabilities occurring at the MHIC on or before that date.

Remediation technician services, project management, and project reporting are contracted to Stantec Consulting Services Inc. (Stantec). Status reports are currently provided on a semi-annual basis with sections organized according to the Areas of Interest (AOIs). Evergreen will submit a status report with the Operation and Maintenance (O&M) activity details, figures, and tables on an annual basis, coinciding with the annual groundwater gauging and monitoring event, completed during the fourth quarter of every year. On the alternating six month interval, Evergreen will submit an abbreviated letter report detailing the O&M activity without figures and with limited tables.

Unless otherwise noted, this status report covers O&M work completed between January 1, 2020 and June 30, 2020. Detailed information regarding O&M activity is included in the attached tables for the MHIC and Marcus Hook Tank Farm as prepared by Stantec.

AOI 1 – 10 Plant

There are no active remediation systems in AOI 1. Monitoring wells in AOI 1 are gauged annually during the fourth quarter.

AOI 2 – 12 Plant

There are no active remediation systems in AOI 2. Monitoring wells in AOI 2 are gauged annually during the fourth quarter.

AOI 3 – Facility Office Buildings

Two active remediation systems are located in AOI 3: the Laboratory Building Remediation System and the Green Street Remediation System.

Laboratory Building Remediation System

The Laboratory Building Remediation System was upgraded in 2016 to include pneumatic total fluids pumps at nine recovery wells (RW-5, RW-6, RW-7, RW-29, RW-30, RW-31, RW-32, RW-134, and RW-135).

Liquids from the pneumatic total fluids pumps are processed through a settling tank and an oil/water separator (OWS) within the treatment trailer. The recovered groundwater is pumped to the existing discharge location adjacent to RW-7 and subsequently transferred to the 15 Plant Separator. Recovered light non-aqueous phase liquid (LNAPL) is stored in two 550-gallon holding tanks and one 5,000-gallon holding tank. The recovered LNAPL is periodically pumped out and processed through the facility's slop oil system.

The remediation system was modified to include a larger OWS and a soil vapor extraction (SVE) blower in 2015. The effluent from the SVE system is treated by a Falmouth Falco 100 catalytic oxidizer. The system was configured to pump from RW-7, RW-29, RW-30, RW-31, RW-32, RW-134, and RW-135 during the reporting period. In December 2019, a chemical feed injection pump was installed to evaluate chemical additives to reduce iron fouling within the system piping. In May 2020, the chemical feed additive injection was started on RW-135 to reduce iron fouling of system piping. The chemical feed was operational during the reporting period.

A total of 2,148,335 gallons of groundwater and 2,699 gallons of LNAPL were recovered in the first half of 2020. Details of performance data for the Laboratory Building Remediation System operation are presented in

Attachment 1.

A solar powered LNAPL pump was installed at select wells during the reporting period to evaluate the LNAPL recovery potential. Locations included MW-264, MW-266, MW-488, MW-492, MW-98, and MW-99. During the reporting period, 37 gallons of LNAPL were recovered using the solar powered pump.

Green Street Remediation System

The remediation system at Green Street consists of an interceptor trench and pneumatic LNAPL skimming pumps at nine wells (S-1, S-2, S-3, S-4, S-5, SS-1A(new), P-3, P-4, and P-5) within the trench. Due to an underground air leak, the LNAPL skimming pumps were removed from S-4 and P-5 in November 2014, and passive bailers were installed. On June 26, 2018 the passive bailer was removed and a skimmer pump was installed in S-4. During February and March 2019, modifications were made to the system which included replacing well vaults and the installation of 12-volt LNAPL pumps in P-4, P-5, and S-5. Product thicknesses are measured and pumps are turned on/off as needed based on recoverable product accumulations in each well. Passive bailers or sorbent wicks are installed in P-1, P-2, and SP-4A as needed to recover LNAPL. The recovered LNAPL is stored in a 1,100-gallon holding tank that is periodically pumped out, and the contents are processed through the facility's slop oil system.

A total of 1,072 gallons of LNAPL was recovered by this system in the first half of 2020. Details of performance data for the Green Street Remediation System can be found in **Attachment 1**.

AOI 4 – Upper No. 1 Tank Farm

Two remediation systems are located in AOI 4: the 12 Tank Remediation System and the H-5/Post Road Remediation System.

12 Tank Remediation System

The 12 Tank Remediation System was started in 2001 and included pneumatic total fluids pumps in 12 recovery wells (RW-3, RW-16, RW-17, RW-18, RW-147, RW-148, RW-160, RW-161, RW-162, RW-163, RW-165, and RW-272) located on the west and south sides of 12 Tank, along Hewes Avenue and Post Road. Groundwater and LNAPL are processed through an OWS. The recovered groundwater is pumped through an existing 10-inch diameter high-density polyethylene (HDPE) facility line to the Middle Creek Conveyance process sewer line southeast of 254 Tank. Recovered LNAPL is stored in a 550-gallon holding tank that is periodically pumped out and the contents are processed through the facility's slop oil system. In response to high concentrations of VOC vapors in the utility manholes along Post Road, the SVE system, including MW-199, MW-200, RW-3, RW-147, RW-148, RW-160, and RW-161, was started on September 29, 2014. Volatile organic compound (VOC) vapors from the closed-vent system pass through an enclosed biofilter and granular activated carbon vessel. The treated air stream is subsequently vented to the atmosphere.

A total of 33,400 gallons of groundwater and 101 gallons of LNAPL was recovered by the 12 Tank Remediation System during the first half of 2020. Details of minor maintenance and performance data for the 12 Tank Remediation System can be found in **Attachment 1**.

H-5/Post Road Remediation System

The H-5/Post Road Remediation System consists of a series of total fluids extraction points around the H-5 Control Room and a row of extraction points along Post Road and west of Hewes Avenue in areas of known LNAPL presence. Currently, there are nine recovery wells (RW-247, RW-248, RW-249, RW-250, RW-251, RW-252, RW-253, RW-254, and RW-255) pumping from around the H-5 Control Room and eight recovery wells (RW-4, RW-150, RW-151, RW-152, RW-155, RW-156, RW-157, and RW-201) pumping along Post Road. Liquids recovered by the system are pumped to a benzene National Emissions Standards for Hazardous Air Pollutants (NESHAP) compliant facility process sewer.

A total of 81,820 gallons of groundwater and LNAPL was recovered by this system during the first half of 2020. Details of minor maintenance and performance data for the H-5/Post Road Remediation System can be found in **Attachment 1**.

The nine recovery wells around the H-5 Control Room also serve as SVE points. The system includes a Falmouth Falco 100 catalytic oxidizer to treat the SVE effluent. The SVE system was operational during the reporting period to provide additional control of indoor air. In September 2019, a sub-slab vapor control system was installed in the H-5 Control Room building which consists of a blower and Falmouth Falco 200 catalytic oxidizer to evacuate vapors from beneath the building at three sub-slab vapor points. The sub-slab vapor control system was operational during the reporting period.

AOI 5 – Lower No. 1 Tank Farm/15 Plant/17 Plant

Two remediation systems are located in AOI 5; the Middle Creek Remediation System and the Phillips Island Remediation System.

Middle Creek Remediation System

The Middle Creek Remediation System consists of two interceptor trenches located between the 15 Plant Separator and Middle Creek. The trenches are equipped with six-inch diameter recovery wells (RW-A1, RW-B1, and RW-B2) and pneumatic submersible pumps. Total fluids are recovered from the trenches and transferred directly to the facility's

15 Plant Separator. During the reporting period, pneumatic cycle counters were installed on each recovery well to estimate groundwater pumping totals.

A total of 378,642 gallons of total fluids was recovered by this system in the first half of 2020. No sheening was observed in Middle Creek during weekly low tide observations. Details of performance data for the Middle Creek Remediation System can be found in **Attachment 1**.

Phillips Island Remediation System

The Phillips Island Remediation System is comprised of sheet pile walls and a network of recovery wells. The Phillips Island Remediation System is operated and controlled by equipment in two remediation system buildings: the Phillips Island Upper System and the Phillips Island Lower System. Recovered groundwater and LNAPL are conveyed from the Upper System to the Lower System and all fluids are pumped to the facility's process sump (W-21 Sump) for further treatment. The Phillips Island Remediation System discharges directly to the facility; there are no separators, totalizers, or holding tanks associated with this remediation system. O&M activities are conducted weekly. The sump is gauged on a weekly basis and LNAPL is removed via vacuum truck on an as needed basis.

The Lower System consists of total fluids extraction from 14 recovery wells (W-1, W-2, MW-113, MW-114, MW-213, MW-215, MW-218, MW-219, MW-221, MW-223, MW-245, MW-259, MW-260, and MW-261) located along the Delaware River and six sumps (SUMP-1, SUMP-3, SUMP-5, SUMP-7A, SUMP-8, and a large sump referred to as the BIG SUMP) located along a sheet pile wall formerly referred to as the Weeping Wall. MW-213 was added to the system on July 17, 2020 and was installed with a QED Environmental Systems Model AP-4 Pneumatic AutoPump. The SUMP-7A was installed with a QED Environmental Systems Model AP-4 Pneumatic AutoPump and a 1½-inch Wilden double diaphragm pump that is automatically actuated as needed to remove total fluids. The remaining pumping wells are driven by one 1½-inch Wilden double diaphragm pump mounted to a skid unit with 20 separate air actuated valves which permit each well to be optimized depending on its operating characteristics. Compressed air is supplied to the system by a Kaeser air compressor located inside the Lower System building.

The Upper System currently consists of total fluids extraction from 21 recovery wells along the West Wall (PI-1 through PI-15, MW-116, MW-216, MW-256, MW-257, MW-258, and MW-587). Wells MW-257, MW-258, and MW-587 were added to the system on January 10, 2019 and are equipped with QED Environmental Systems Model AP-4+ Pneumatic AutoPumps. The remaining recovery wells utilize a skid unit with a 1½-inch Wilden double diaphragm pump and 20 separate air actuated valves. Compressed air is supplied to the system by a Kaeser air compressor located inside the Upper System building.

The Upper Phillips Island System was returned to service on January 6, 2020 following the completion of characterization activities. A total of 8,068,939 gallons of groundwater and 7,458 gallons of LNAPL was recovered by the Phillips Island Remediation System during the first half of 2020. Details of minor maintenance and performance data for the Phillips Island Remediation System are provided in **Attachment 1**. Evergreen is conducting additional testing and investigations to evaluate the current system and determine potential modifications or additions to remediation in the vicinity of the system. Information from these activities will be summarized in future submittals.

AOI 6 – Lube Oil Center

There is one active remediation system located in AOI 6: the Bulkhead Remediation System. Historically, there were two other remediation systems in AOI 6: the RW-8 (No. 2 Dock) Remediation System and the Lube Oil Tank Field Remediation System (RW-9), which have not operated since 2009 and 2013, respectively, and will therefore not be discussed in this report.

Bulkhead Remediation System

The Bulkhead Remediation System consists of pneumatic total fluids pumps at four recovery wells (RW-12, RW-13, RW-14, and RW-15) adjacent to the bulkhead and adjacent to an abandoned sewer pipe. Total fluids are discharged to the facility's process sump (W-21 Sump) prior to transfer to the facility's 15 Plant Separator. This is

the same sump that receives discharge of recovered fluids from the Phillips Island Remediation System (described previously). The sump is gauged on a weekly basis, and LNAPL is removed via vacuum truck on an as needed basis. The quantity of LNAPL recovered is accounted for within the Phillips Island Remediation System total.

During the reporting period, pneumatic cycle counters were installed on each recovery well to estimate groundwater pumping totals. A total of 3,106,496 gallons of total fluids was recovered by this system in the first half of 2020. Details of minor maintenance and performance data for the Bulkhead Remediation System can be found in **Attachment 1**.

AOI 7 – Delaware Portion of the Facility

One remediation system is located in AOI 7, the Delaware Seep Remediation System. The Delaware Seep Remediation System is located along the Delaware River and includes the Delaware Seep wells. These 11 recovery wells were installed along the Delaware River in the State of Delaware (OW-2, OW-3, OW-4, OW-7, OW-9, OW-10, OW-11, and OW-12) and in Pennsylvania (OW-13, OW-14, and OW-15). The Delaware Seep Remediation System utilizes pneumatic submersible total fluids pumps. The total fluids from the Delaware Seep Remediation System, included as part of the Phillips Island Upper System, are pumped to the Phillips Island Lower System and then to the facility's process sump (W-21 Sump).

System operational data for the Delaware Seep Remediation System is contained in the Phillips Island Remediation System summary in **Attachment 1**.

Groundwater Monitoring

The annual site-wide well gauging, which is typically conducted during the fourth quarter of each year, is used to identify the presence of LNAPL and determine groundwater flow patterns. The purpose of the annual groundwater sampling event is to evaluate groundwater concentration trends at the perimeter of the facility. The annual groundwater sampling program consists of sampling select perimeter wells throughout the MHIC.

Marcus Hook Tank Farm (Formerly No. 2 Tank Farm)

The former No. 2 Tank Farm (currently named the Marcus Hook Tank Farm and owned and operated by Sunoco Partners Marketing & Terminals, an Energy Transfer Partnership) is located approximately two miles north of the MHIC at the intersection of Market Street and Conchester Road in Aston, Pennsylvania. Although the former No. 2 Tank Farm is not part of the MHIC, nor the work being performed under the Pennsylvania One Cleanup Program, the remediation status of the former No. 2 Tank Farm will continue to be detailed in this report. The former No. 2 Tank Farm has two active total fluids remediation systems: the Separator Area Remediation System and the L-1 Pump House Remediation System.

Separator Area Remediation System

The Separator Area Remediation System includes eleven recovery wells (RW-1, RW-2, RW-3, RW-4, RW-5, RW-7, RW-9, RW-13, RW-14, RW-16, and RW-17). Groundwater discharge process piping and compressed air supply lines required for each recovery well were placed below grade in order to operate the remediation system year-round.

Each well contains a QED Environmental Systems Model AP-4+ Top Inlet Short Pneumatic AutoPump to recover groundwater and LNAPL. The pumps utilize compressed air which is supplied by a Kaeser rotary screw air compressor. The total fluids are processed through an OWS and the recovered groundwater is pumped to the Marcus Hook Tank Farm's separator which is subsequently pumped to the "5 Line", which discharges to the MHIC 15 Plant Separator. The system includes a Falmouth Falco 100 catalytic oxidizer to treat emissions from the OWS and LNAPL holding tank. The catalytic oxidizer was placed into operation on May 17, 2019. The recovered LNAPL is pumped to a 500-gallon holding tank that is periodically pumped out and the contents are recycled at the MHIC.

A total of 1,869,649 gallons of groundwater was recovered by this system during the first half of 2020. Details of minor maintenance and performance data for the Separator Area Remediation System are presented in **Attachment 1**.

L-1 Pump House Remediation System

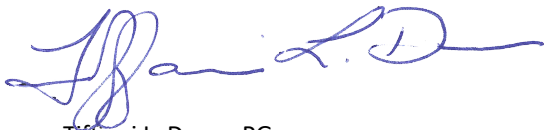
The L-1 Pump House Remediation System was upgraded in July/August 2015 to include pneumatic total fluids pumps at ten recovery wells (MW-31, MW-41, MW-200, RW-104, RW-111, RW-114, RW-117, RW-119, RW-120, and RW-121). A two-inch HDPE lateral line connects each recovery well to a three-inch HDPE trunk line, which transfers the total fluids to the treatment system. All groundwater process piping and compressed air supply lines from the recovery wells to the treatment system trailer were installed approximately one-foot below grade in order to operate the remediation system year-round.

Each well consists of a pneumatic QED Environmental Systems Model AP-4+ Top Inlet Long AutoPump to recover groundwater and LNAPL. The pumps utilize compressed air which is supplied by a Kaeser rotary screw air compressor. Total fluids from the pneumatic pumps are processed through an OWS. Recovered groundwater is pumped through a three-inch diameter HDPE discharge line, installed approximately three feet below grade, to the "5 Line", which discharges to the MHIC 15 Plant Separator. Recovered LNAPL is stored in a 500-gallon holding tank that is periodically pumped out and the contents are recycled at the MHIC.

A total of 2,075,680 gallons of groundwater and 2,107 gallons of LNAPL were recovered by this system during the first half of 2020. Details of minor maintenance and performance data for the L-1 Pump House Remediation System are presented in **Attachment 1**.

Please direct any questions or comments to me at (302) 477-1305 or tldoerr@evergreenresmgt.com.

Sincerely,
Evergreen Resources Management Operations



Tiffani L. Doerr, PG
Project Manager

Enclosures:

Attachment 1 – Remediation System Recovery Data

cc: Larry Matson, DNREC
Kevin Bilash, USEPA Region III
Bradford Fish, ET
Andrew Bradley, Stantec

File: Groundwater Remediation Status Report, First Half 2020
Marcus Hook Refinery Operations, a series of Evergreen Resources Group, LLC

ATTACHMENT 1
Remediation System Recovery Data

Marcus Hook Refinery Operations, a series of Evergreen Resources Group, LLC
System Operational Data
AOI 3: Laboratory Building Remediation System
First Half 2020

| Date | LNAPL Recovered in Period (gallons) | Total LNAPL Recovered (gallons) | Groundwater Recovered in Period (gallons) | Total Groundwater Recovered (gallons) |
|-----------|-------------------------------------|---------------------------------|---|---------------------------------------|
| 1/7/2020 | 310.5 | 60,706.1 | 7,045 | 20,347,419 |
| 1/15/2020 | 29.5 | 60,735.6 | 43,330 | 20,390,749 |
| 1/24/2020 | 470.0 | 61,205.6 | 30,240 | 20,420,989 |
| 1/31/2020 | 61.0 | 61,266.6 | 84,920 | 20,505,909 |
| 2/7/2020 | 0.0 | 61,266.6 | 131,770 | 20,637,679 |
| 2/14/2020 | 91.6 | 61,358.2 | 61,680 | 20,699,359 |
| 2/17/2020 | 88.5 | 61,446.7 | 87,450 | 20,786,809 |
| 2/28/2020 | 94.5 | 61,541.2 | 114,200 | 20,901,009 |
| 3/7/2020 | 127.0 | 61,668.2 | 26,680 | 20,927,689 |
| 3/11/2020 | 64.0 | 61,732.2 | 82,870 | 21,010,559 |
| 3/18/2020 | 127.0 | 61,859.2 | 68,500 | 21,079,059 |
| 3/27/2020 | 133.1 | 61,992.3 | 107,900 | 21,186,959 |
| 4/1/2020 | 65.0 | 62,057.3 | 53,590 | 21,240,549 |
| 4/9/2020 | 98.5 | 62,155.8 | 65,790 | 21,306,339 |
| 4/15/2020 | 66.0 | 62,221.8 | 56,410 | 21,362,749 |
| 4/24/2020 | 129.0 | 62,350.8 | 169,010 | 21,531,759 |
| 4/30/2020 | 118.0 | 62,468.8 | 35,790 | 21,567,549 |
| 5/8/2020 | 60.0 | 62,528.8 | 76,820 | 21,644,369 |
| 5/11/2020 | 61.0 | 62,589.8 | 99,070 | 21,743,439 |
| 5/20/2020 | 61.0 | 62,650.8 | 118,230 | 21,861,669 |
| 5/29/2020 | 93.5 | 62,744.3 | 107,570 | 21,969,239 |
| 6/1/2020 | 63.0 | 62,807.3 | 145,510 | 22,114,749 |
| 6/9/2020 | 0.0 | 62,807.3 | 74,950 | 22,189,699 |
| 6/15/2020 | 287.5 | 63,094.8 | 166,980 | 22,356,679 |
| 6/22/2020 | 0.0 | 63,094.8 | 132,030 | 22,488,709 |

Notes:

OWS: oil/water separator

LNAPL: Light Non-Aqueous Phase Liquid

The Laboratory Building Remediation System consists of 9 total fluids (groundwater and LNAPL) pumps (RW-5, RW-6, RW-7, RW-29, RW-30, RW-31, RW-32, RW-134, and RW-135). Product thicknesses are measured and pumps are turned on/off as needed based on recoverable product thickness accumulations in each well.

The system was operational for the reporting period with the following exceptions:

RW-5, RW-6, and RW-7 were turned off periodically throughout the reporting period due to an inadequate presence of LNAPL in these recovery wells.

From January 20 to January 22, the system was taken out of service due to iron fouling of the effluent piping. The system's effluent piping was jetted and the system was returned to service.

On March 6, the system transfer pump was replaced.

On March 18, the system transfer pump was not operational. The transfer pump was cleaned and returned to service.

On April 1, the pump in RW-31 was not operational. The pump was cleaned and returned to service.

On April 9, the pumps in RW-30 and RW-31 were not operational due to a fouled manifold. The manifold was jetted to remove iron fouling and the pumps were returned to service.

From May 4 to May 7, the system was taken out of service during system line due to iron fouling of the system piping. The piping was jetted and the system was returned to service on May 7.

On May 14, the pump in RW-7 was not operational. The pump was cleaned and returned to service.

On May 29, the system was out of service due to a high water alarm. System piping between the settling tank and OWS was cleaned, and the system was returned to service.

Marcus Hook Refinery Operations, a series of Evergreen Resources Group, LLC
System Operational Data
AOI 3: Green Street Remediation System
First Half 2020

| Date | LNAPL Recovered | |
|-----------|---------------------|--------------------|
| | Period (gallons) | Total (gallons) |
| 3-Jan-20 | 57.8 | 33,755 |
| 7-Jan-20 | 60.5 | 33,815 |
| 15-Jan-20 | 43.5 | 33,859 |
| 24-Jan-20 | 3.9 | 33,862 |
| 27-Jan-20 | 61.6 | 33,924 |
| 5-Feb-20 | 69.3 | 33,993 |
| 11-Feb-20 | 62.2 | 34,056 |
| 19-Feb-20 | 67.7 | 34,123 |
| 24-Feb-20 | 14.9 | 34,138 |
| 5-Mar-20 | 130.4 | 34,268 |
| 10-Mar-20 | 11.0 | 34,279 |
| 17-Mar-20 | 32.5 | 34,312 |
| 27-Mar-20 | 87.5 | 34,399 |
| 3-Apr-20 | 51.2 | 34,450 |
| 10-Apr-20 | 22.0 | 34,472 |
| 17-Apr-20 | 115.2 | 34,588 |
| 22-Apr-20 | 41.8 | 34,629 |
| 27-Apr-20 | 24.8 | 34,654 |
| 6-May-20 | 23.7 | 34,678 |
| 15-May-20 | 20.4 | 34,698 |
| 20-May-20 | 5.4 | 34,704 |
| 28-May-20 | 5.5 | 34,709 |
| 4-Jun-20 | 0.0 | 34,709 |
| 9-Jun-20 | 0.0 | 34,709 |
| 19-Jun-20 | 3.7 | 34,713 |
| 26-Jun-20 | 3.7 | 34,716 |
| 8-Jul-20 | 19.1 | 34,736 |
| 17-Jul-20 | 8.3 | 34,744 |
| 24-Jul-20 | 8.3 | 34,752 |
| 30-Jul-20 | 16.5 | 34,769 |

Notes:

LNAPL: Light Non-Aqueous Phase Liquid

The Green Street Remediation System consists of nine LNAPL only skimming pumps (S-1, S-2, S-3, S-4, S-5, SS-1A(new), P-3, P-4, and P-5). Product thicknesses are checked weekly and pumps are turned on/off as needed based on recoverable product thickness accumulations in each well.

The system was operational for the reporting period.

Marcus Hook Refinery Operations, a series of Evergreen Resources Group, LLC
Remediation System Operational Data
AOI 4: H-5/Post Road System
First Half 2020

| Date | Total Flow (gallons) | Period Total Flow (gallons) | Calculated System Flow Rate (gpm) |
|-----------|----------------------|-----------------------------|-----------------------------------|
| 3-Jan-20 | 14,491,565 | 2,420 | 0.24 |
| 8-Jan-20 | 14,493,415 | 1,850 | 0.26 |
| 16-Jan-20 | 14,493,505 | 90 | 0.01 |
| 24-Jan-20 | 14,493,735 | 230 | 0.02 |
| 28-Jan-20 | 14,493,905 | 170 | 0.03 |
| 7-Feb-20 | 14,505,365 | 11,460 | 0.80 |
| 14-Feb-20 | 14,515,335 | 9,970 | 0.99 |
| 21-Feb-20 | 14,533,165 | 17,830 | 1.77 |
| 25-Feb-20 | 14,533,365 | 200 | 0.03 |
| 7-Mar-20 | 14,535,025 | 1,660 | 0.10 |
| 12-Mar-20 | 14,535,185 | 160 | 0.02 |
| 20-Mar-20 | 14,536,835 | 1,650 | 0.14 |
| 27-Mar-20 | 14,538,125 | 1,290 | 0.13 |
| 1-Apr-20 | 14,539,415 | 1,290 | 0.18 |
| 10-Apr-20 | 14,541,425 | 2,010 | 0.16 |
| 16-Apr-20 | 14,545,325 | 3,900 | 0.45 |
| 22-Apr-20 | 14,545,975 | 650 | 0.08 |
| 29-Apr-20 | 14,547,475 | 1,500 | 0.15 |
| 7-May-20 | 14,553,055 | 5,580 | 0.48 |
| 13-May-20 | 14,563,515 | 10,460 | 1.21 |
| 22-May-20 | 14,566,515 | 3,000 | 0.23 |
| 28-May-20 | 14,566,565 | 50 | 0.01 |
| 3-Jun-20 | 14,566,585 | 20 | 0.00 |
| 12-Jun-20 | 14,567,115 | 530 | 0.04 |
| 19-Jun-20 | 14,567,115 | 0 | 0.00 |
| 25-Jun-20 | 14,567,125 | 10 | 0.00 |

Notes:

gpm: gallons per minute

Pneumatic total fluids pumps are installed in nine recovery wells (RW-247, RW-248, RW-249, RW-250, RW-251, RW-252, RW-253, RW-254, and RW-255) pumping from around the H-5 Control Room and eight recovery wells (RW-4, RW-150, RW-151, RW-152, RW-155, RW-156, RW-157, and RW-201) pumping along Post Road.

The system was operational for the reporting period with the following exceptions:

During the reporting period, periods of low groundwater water reduced the available water to be pumped by the system.

On March 13, RW-250, RW-251, RW-252, RW-253, RW-254, and RW-255 were not operational due to iron fouling of system piping.

On April 10, the system piping was jetted and RW-250, RW-251, RW-252, RW-253, RW-254, and RW-255 were returned to service.

On April 16, the pumps in RW-251 and RW-254 were not operational. These pumps were removed for maintenance.

On April 29, the pump was reinstalled in RW-251 and returned to service.

On May 7, the pump was reinstalled in RW-254 and returned to service. The pump in RW-248 was not operational; it was removed for maintenance.

Marcus Hook Refinery Operations, a series of Evergreen Resources Group, LLC
Remediation System Operational Data
AOI 4: 12 Tank Remediation System
First Half 2020 Reporting Period

| Date | Period Total Flow (gallons) | Total Flow (gallons) | Average Daily Flow (gpd) | LNAPL Recovered in Period (gallons) | Total LNAPL Recovered (gallons) |
|-----------|--------------------------------|-------------------------|--------------------------------|---|---------------------------------------|
| 03-Jan-20 | 1,600 | 2,300,211 | 229 | 0.0 | 693 |
| 08-Jan-20 | 500 | 2,300,711 | 100 | 0.0 | 693 |
| 17-Jan-20 | 300 | 2,301,011 | 33 | 11.0 | 704 |
| 23-Jan-20 | 200 | 2,301,211 | 33 | 6.0 | 710 |
| 28-Jan-20 | 100 | 2,301,311 | 20 | 0.0 | 710 |
| 06-Feb-20 | 1,100 | 2,302,411 | 122 | 0.0 | 710 |
| 11-Feb-20 | 2,400 | 2,304,811 | 480 | 0.0 | 710 |
| 19-Feb-20 | 800 | 2,305,611 | 100 | 0.0 | 710 |
| 25-Feb-20 | 1,200 | 2,306,811 | 200 | 0.0 | 710 |
| 05-Mar-20 | 500 | 2,307,311 | 56 | 0.0 | 710 |
| 11-Mar-20 | 800 | 2,308,111 | 133 | 0.0 | 710 |
| 20-Mar-20 | 1,300 | 2,309,411 | 144 | 83.0 | 793 |
| 24-Mar-20 | 2,550 | 2,311,961 | 638 | 0.0 | 793 |
| 30-Mar-20 | 2,550 | 2,314,511 | 425 | 0.8 | 794 |
| 08-Apr-20 | 2,200 | 2,316,711 | 244 | 0.0 | 794 |
| 15-Apr-20 | 3,200 | 2,319,911 | 457 | 0.0 | 794 |
| 22-Apr-20 | 300 | 2,320,211 | 43 | 0.0 | 794 |
| 28-Apr-20 | 2,100 | 2,322,311 | 350 | 0.0 | 794 |
| 06-May-20 | 800 | 2,323,111 | 100 | 0.0 | 794 |
| 13-May-20 | 100 | 2,323,211 | 14 | 0.0 | 794 |
| 19-May-20 | 200 | 2,323,411 | 33 | 0.0 | 794 |
| 28-May-20 | 3,200 | 2,326,611 | 356 | 0.0 | 794 |
| 03-Jun-20 | 200 | 2,326,811 | 33 | 0.0 | 794 |
| 11-Jun-20 | 3,000 | 2,329,811 | 375 | 0.0 | 794 |
| 19-Jun-20 | 2,200 | 2,332,011 | 275 | 0.0 | 794 |
| 25-Jun-20 | 0 | 2,332,011 | 0 | 0.0 | 794 |

Notes:

gpd: gallons per day

LNAPL: Light Non-Aqueous Phase Liquid

The 12 Tank System consists of 12 recovery wells (RW-3, RW-16, RW-17, RW-18, RW-147, RW-148, RW-160, RW-161, RW-162, RW-163, RW-165, and RW-272).

The system was operational for the reporting period with the following exceptions:

During the reporting period, low groundwater levels in the area of the remediation system resulted in minimal flow through the system.

On March 20, the system was not operational due to a high water alarm at the system holding tank. On March 24, the system holding tank was emptied and oil/water separator was cleaned, and the system was returned to service.

On April 8, the pump in RW-3 was not operational. This pump was removed for maintenance.

On April 22, the pump in RW-3 was reinstalled and returned to service.

Marcus Hook Refinery Operations, a series of Evergreen Resources Group, LLC
System Operational Data
AOI 5: Middle Creek Remediation System
First Half 2020

| Date | RW-A1 | RW-B1 | RW-B2 | Total Period Groundwater Recovery (gal) |
|-------------------|------------------|------------------|------------------|---|
| | Total Flow (gal) | Total Flow (gal) | Total Flow (gal) | |
| 1/01/20 - 1/31/20 | 31 | 56,730 | 0 | 56,761 |
| 2/01/20 - 2/29/20 | 29 | 53,070 | 0 | 53,099 |
| 3/01/20 - 3/31/20 | 30,578 | 25,988 | 92 | 56,658 |
| 4/01/20 - 4/30/20 | 7,088 | 20,377 | 189 | 27,654 |
| 5/01/20 - 5/31/20 | 16,679 | 65,733 | 1,705 | 84,117 |
| 6/01/20 - 6/30/20 | 22,050 | 51,972 | 26,331 | 100,353 |

Notes:

gal: gallons

Two groundwater interceptor trenches were installed between the 15 Plant Separator and Middle Creek in December 2008. Pneumatic total fluids pumps were installed in three wells (RW-A1, RW-B1, and RW-B2) within the trenches. Total fluids are conveyed to the 15 Plant Separator.

Groundwater pumping rates were historically calculated using pump tests. During February 2020, cycle counters were placed on individual pumps. Groundwater recovery totals are now calculated from the average gallons recovery per cycle counted at each pump (0.14 gallons per cycle).

The system was operational for the reporting period with the following exceptions:

On March 3, the pumps in RW-A1, RW-B1, and RW-B2 were removed for cleaning and maintenance.

On March 9, the pumps in RW-A1, RW-B1, and RW-B2 were reinstalled and returned to service.

On March 25, the cycle counter at RW-B1 required maintenance. The cycle counter cleaned and returned to service. Average cycle rates were applied to calculate the recovery volume during the week prior to March 25.

On March 31, the cycle counter at RW-B2 required maintenance. The cycle counter was cleaned and returned to service. Average cycle rates were applied to calculate the recovery volume during the week prior to March 31.

On April 8, the cycle counter at RW-B1 required maintenance. The cycle counter was cleaned and returned to service. Average cycle rates were applied to calculate the recovery volume during the week prior to April 8.

On May 5 and May 12, the system air compressor was operational due to water accumulation. The air compressor receiver tank was drained and the system was returned to service.

On June 25, the pump in RW-B2 was removed for maintenance and returned to service.

Marcus Hook Refinery Operations, a series of Evergreen Resources Group, LLC
System Operational Data
AOI 6: Bulkhead Remediation System
First Half 2020

| Date | Days in Period | Period Total Flow (gallons) | Total Groundwater Recovery (gallons) |
|-----------|----------------|--------------------------------|---|
| 3-Jan-20 | 9 | 51,840 | 14,194,045 |
| 8-Jan-20 | 5 | 28,800 | 14,222,845 |
| 16-Jan-20 | 8 | 46,080 | 14,268,925 |
| 23-Jan-20 | 7 | 40,320 | 14,309,245 |
| 29-Jan-20 | 6 | 34,560 | 14,343,805 |
| 3-Feb-20 | 5 | 28,800 | 14,372,605 |
| 13-Feb-20 | 10 | 57,600 | 14,430,205 |
| 19-Feb-20 | 6 | 34,560 | 14,464,765 |
| 24-Feb-20 | 5 | 36,816 | 14,501,581 |
| 3-Mar-20 | 8 | 56,381 | 14,557,962 |
| 9-Mar-20 | 6 | 86,360 | 14,644,322 |
| 17-Mar-20 | 8 | 218,688 | 14,863,010 |
| 26-Mar-20 | 9 | 216,396 | 15,079,407 |
| 31-Mar-20 | 5 | 133,125 | 15,212,532 |
| 7-Apr-20 | 7 | 184,084 | 15,396,616 |
| 14-Apr-20 | 7 | 100,105 | 15,496,721 |
| 21-Apr-20 | 7 | 132,276 | 15,628,997 |
| 28-Apr-20 | 7 | 158,937 | 15,787,934 |
| 6-May-20 | 8 | 187,312 | 15,975,247 |
| 12-May-20 | 6 | 157,215 | 16,132,462 |
| 18-May-20 | 6 | 111,418 | 16,243,880 |
| 26-May-20 | 8 | 197,968 | 16,441,848 |
| 2-Jun-20 | 7 | 137,974 | 16,579,821 |
| 8-Jun-20 | 6 | 126,114 | 16,705,935 |
| 16-Jun-20 | 8 | 194,426 | 16,900,361 |
| 23-Jun-20 | 7 | 166,364 | 17,066,725 |
| 30-Jun-20 | 7 | 181,976 | 17,248,701 |

Notes:

The Bulkhead Remediation System was started on November 5, 2012. Pneumatic total fluids pumps are installed in four recovery wells (RW-12, RW-13, RW-14, and RW-15). The system discharges directly to the facility's W-21 Sump, and estimated light non-aqueous phase liquid (LNAPL) recovery totals are reported jointly with the Phillips Island Remediation System LNAPL totals. On January 23, 2020, cycle counters were installed on the recovery well pumps. Groundwater recovery totals are calculated from the average gallons of recovery per cycle based on pump specifications (RW-12: 0.14 gallons per cycle; RW-13, RW-14, and RW-15: 0.29 gallons per cycle).

The system was operational during the reporting period with the following exceptions:

On March 17, the pump in RW-14 was not operational. The pump was removed for cleaning and repair.

On March 26, the pump in RW-14 was reinstalled and returned to service; however, the pump cycle counter required maintenance. Average cycle rates were applied to calculate the recovery volume for RW-14 from March 26 through April 7. The cycle counter was returned to operation on April 7.

Marcus Hook Refinery Operations, a series of Evergreen Resources Group, LLC
System Operational Data
AOI 5/7: Phillips Island Remediation System
First Half 2020

| Date | Upper Phillips Island System (gallons) | Lower Phillips Island System (gallons) | Delaware Seep (gallons) | Period Groundwater Recovery Volume (gallons) | Period LNAPL Recovery Volume (gallons) | Total LNAPL Recovery Volume (gallons) |
|-----------|--|--|-------------------------|--|--|---------------------------------------|
| 3-Jan-20 | 0 | 1,408 | 484,671 | 486,079 | --- | 50,558 |
| 10-Jan-20 | 0 | 896 | 308,427 | 309,323 | --- | 50,558 |
| 15-Jan-20 | 644 | 640 | 220,305 | 221,589 | --- | 50,558 |
| 22-Jan-20 | 368 | 896 | 308,427 | 309,691 | 920 | 51,478 |
| 30-Jan-20 | 736 | 1,024 | 352,488 | 354,248 | --- | 51,478 |
| 5-Feb-20 | 552 | 768 | 264,366 | 265,686 | 1,061 | 52,539 |
| 14-Feb-20 | 828 | 1,152 | 396,549 | 398,529 | --- | 52,539 |
| 20-Feb-20 | 552 | 768 | 264,366 | 265,686 | --- | 52,539 |
| 24-Feb-20 | 368 | 512 | 176,244 | 177,124 | 935 | 53,475 |
| 4-Mar-20 | 828 | 1,152 | 396,549 | 398,529 | --- | 53,475 |
| 9-Mar-20 | 460 | 640 | 220,305 | 221,405 | --- | 53,475 |
| 16-Mar-20 | 644 | 896 | 308,427 | 309,967 | 986 | 54,460 |
| 25-Mar-20 | 828 | 1,146 | 396,549 | 398,523 | --- | 54,460 |
| 30-Mar-20 | 460 | 640 | 220,305 | 221,405 | --- | 54,460 |
| 7-Apr-20 | 736 | 1,024 | 352,488 | 354,248 | 699 | 55,159 |
| 14-Apr-20 | 644 | 896 | 239,888 | 241,428 | --- | 55,159 |
| 20-Apr-20 | 552 | 768 | 205,618 | 206,938 | 1,106 | 56,266 |
| 27-Apr-20 | 644 | 896 | 239,888 | 241,428 | --- | 56,266 |
| 4-May-20 | 644 | 896 | 239,888 | 241,428 | 1,056 | 57,322 |
| 12-May-20 | 736 | 1,024 | 274,157 | 275,917 | --- | 57,322 |
| 18-May-20 | 552 | 768 | 264,366 | 265,686 | --- | 57,322 |
| 26-May-20 | 736 | 1,024 | 352,488 | 354,248 | --- | 57,322 |
| 1-Jun-20 | 552 | 768 | 264,366 | 265,686 | 236 | 57,558 |
| 8-Jun-20 | 644 | 896 | 308,427 | 309,967 | --- | 57,558 |
| 15-Jun-20 | 644 | 896 | 308,427 | 309,967 | --- | 57,558 |
| 22-Jun-20 | 644 | 896 | 308,427 | 309,967 | --- | 57,558 |
| 30-Jun-20 | 736 | 1,024 | 352,488 | 354,248 | 458 | 58,016 |

Notes:

LNAPL: Light Non-Aqueous Phase Liquid

The Phillips Island Remediation System is comprised of sheet pile walls and a network of recovery wells. The Phillips Island Remediation System is operated and controlled by remediation equipment in two remediation buildings: the Phillips Island Upper System (Delaware Seep and West Wall recovery) and the Phillips Island Lower System. The Phillips Island Remediation System discharges directly to the facility; there are no separators, totalizers, or holding tanks associated with this recovery system.

Estimated LNAPL recovery totals are calculated with product thickness measurements from the facility's W-21 Sump (10.08' [length] and 6.67' [width]).

The system was operational during the reporting period with the following exceptions:

From December 11, 2019 to January 6, 2020, the Upper Phillips Island System was not operational during site characterization activities.

On January 16, the Upper Phillips Island System was turned off while conducting system testing.

On February 20, the pump in RW-587 was removed during system testing, On February 24, the pump was reinstalled in MW-587 and returned to service.

On March 26, Sump-7A was not operational. On March 27, troubleshooting was conducted and Sump-7A was returned to service.

On April 14 and April 20, the pumps in OW-4 and OW-9 were not operational. These pumps were cleaned and returned to service.

On April 27, the pumps in OW-4 and OW-9 were removed for maintenance.

On May 18, the pumps were reinstalled in OW-4 and OW-9 and returned to service.

Marcus Hook Refinery Operations, a series of Evergreen Resources Group, LLC
System Operational Data
Former No. 2 Tank Farm
Separator Area Remediation System
First Half 2020

| Date | Groundwater Recovered in Period (gallons) | Total Groundwater Recovered (gallons) | Average Flow Rate (gpm) | LNAPL Recovered in Period (gallons) | Total LNAPL Recovered (gallons) |
|-----------|---|---------------------------------------|-------------------------|-------------------------------------|---------------------------------|
| 3-Jan-20 | 50,900 | 36,113,888 | 5.0 | 0.0 | 12,189.93 |
| 10-Jan-20 | 0 | 36,113,888 | 0.0 | 0.0 | 12,189.93 |
| 17-Jan-20 | 500 | 36,114,388 | 0.0 | 0.0 | 12,189.93 |
| 21-Jan-20 | 1,300 | 36,115,688 | 0.2 | 0.0 | 12,189.93 |
| 29-Jan-20 | 191,000 | 36,306,688 | 16.6 | 0.0 | 12,189.93 |
| 6-Feb-20 | 106,980 | 36,413,668 | 9.3 | 0.0 | 12,189.93 |
| 13-Feb-20 | 145,912 | 36,559,580 | 14.5 | 0.0 | 12,189.93 |
| 21-Feb-20 | 138,880 | 36,698,460 | 12.1 | 0.0 | 12,189.93 |
| 27-Feb-20 | 104,060 | 36,802,520 | 12.0 | 0.0 | 12,189.93 |
| 5-Mar-20 | 130,425 | 36,932,945 | 12.9 | 0.0 | 12,189.93 |
| 12-Mar-20 | 115,804 | 37,048,749 | 11.5 | 0.0 | 12,189.93 |
| 18-Mar-20 | 54,826 | 37,103,575 | 6.3 | 0.0 | 12,189.93 |
| 26-Mar-20 | 66,248 | 37,169,823 | 5.8 | 0.0 | 12,189.93 |
| 2-Apr-20 | 53,968 | 37,223,791 | 5.4 | 0.0 | 12,189.93 |
| 9-Apr-20 | 29,326 | 37,253,117 | 2.9 | 0.0 | 12,189.93 |
| 16-Apr-20 | 25,776 | 37,278,893 | 2.6 | 0.0 | 12,189.93 |
| 23-Apr-20 | 32,331 | 37,311,224 | 3.2 | 0.0 | 12,189.93 |
| 30-Apr-20 | 156,026 | 37,467,250 | 15.5 | 0.0 | 12,189.93 |
| 7-May-20 | 11,139 | 37,478,389 | 1.1 | 0.0 | 12,189.93 |
| 14-May-20 | 3,458 | 37,481,847 | 0.3 | 0.0 | 12,189.93 |
| 21-May-20 | 222,260 | 37,704,107 | 22.0 | 0.0 | 12,189.93 |
| 29-May-20 | 100,755 | 37,804,862 | 8.7 | 0.0 | 12,189.93 |
| 5-Jun-20 | 100,755 | 37,905,617 | 10.0 | 0.0 | 12,189.93 |
| 11-Jun-20 | 7,841 | 37,913,458 | 0.9 | 0.0 | 12,189.93 |
| 18-Jun-20 | 101 | 37,913,559 | 0.0 | 0.0 | 12,189.93 |
| 26-Jun-20 | 19,078 | 37,932,637 | 1.7 | 0.0 | 12,189.93 |

NOTES:

gpm: gallons per minute

LNAPL: Light Non-Aqueous Phase Liquid

OWS: Oil/Water Separator

The Average Flow Rate is calculated based on the total water recovered in the period and the number of days in the period.

The system was operational for the reporting period with the following exceptions:

On January 10, the system was not operational due to a high level alarm in the LNAPL holding tank. On January 17, the tank was pumped out and the system was returned to operation.

On January 21 and January 29, the system was not operational due to a high level alarm. The floats were cleaned and the system was returned to service.

On February 6, the flow meter was replaced.

On March 12, RW-13 was not operational. The pump was removed for service.

On March 18, the system was temporarily out of service during a power outage at Marcus Hook Tank Farm.

On April 9, RW-14 was not operational due to silt in the well.

On April 23, the pumps in RW-13 and RW-14 were replaced and the wells were returned to

From May 14 to May 21, the system was not operational due to iron fouling of the effluent piping.

The piping was jetted and the system was returned to service on May 21.

On June 18, the system was not operational due to a high level alarm on the OWS. The system was reset and returned to service.

Marcus Hook Refinery Operations, a series of Evergreen Resources Group, LLC
System Operational Data
Former No. 2 Tank Farm
L-1 Pump House Remediation System
First Half 2020

| Date | Groundwater Recovered in Period (gallons) | Total Groundwater Recovered (gallons) | LNAPL Recovered in Period (gallons) | Total LNAPL Recovered (gallons) |
|-----------|---|---------------------------------------|-------------------------------------|---------------------------------|
| 3-Jan-20 | 85,650 | 11,230,474 | 116.9 | 34,338.00 |
| 10-Jan-20 | 85,500 | 11,315,974 | 113.5 | 34,451.50 |
| 17-Jan-20 | 68,340 | 11,384,314 | 95.3 | 34,546.80 |
| 21-Jan-20 | 75,320 | 11,459,634 | 117.4 | 34,664.20 |
| 29-Jan-20 | 77,470 | 11,537,104 | 143.9 | 34,808.10 |
| 6-Feb-20 | 88,580 | 11,625,684 | 136.5 | 34,944.60 |
| 13-Feb-20 | 48,600 | 11,674,284 | 0.0 | 34,944.60 |
| 21-Feb-20 | 132,830 | 11,807,114 | 99.5 | 35,044.10 |
| 27-Feb-20 | 26,680 | 11,833,794 | 0.0 | 35,044.10 |
| 5-Mar-20 | 157,960 | 11,991,754 | 49.1 | 35,093.20 |
| 12-Mar-20 | 91,590 | 12,083,344 | 272.6 | 35,365.80 |
| 18-Mar-20 | 46,280 | 12,129,624 | 0.3 | 35,366.10 |
| 26-Mar-20 | 93,960 | 12,223,584 | 0.0 | 35,366.10 |
| 2-Apr-20 | 88,330 | 12,311,914 | 234.0 | 35,600.10 |
| 9-Apr-20 | 76,060 | 12,387,974 | 113.5 | 35,713.60 |
| 16-Apr-20 | 76,610 | 12,464,584 | 115.4 | 35,829.00 |
| 23-Apr-20 | 13,540 | 12,478,124 | 21.9 | 35,850.90 |
| 30-Apr-20 | 110,660 | 12,588,784 | 76.9 | 35,927.80 |
| 7-May-20 | 115,180 | 12,703,964 | 59.0 | 35,986.80 |
| 14-May-20 | 102,940 | 12,806,904 | 71.6 | 36,058.40 |
| 21-May-20 | 94,900 | 12,901,804 | 47.1 | 36,105.50 |
| 29-May-20 | 103,100 | 13,004,904 | 53.8 | 36,159.30 |
| 5-Jun-20 | 71,700 | 13,076,604 | 64.8 | 36,224.10 |
| 11-Jun-20 | 76,600 | 13,153,204 | 53.6 | 36,277.70 |
| 18-Jun-20 | 66,600 | 13,219,804 | 50.0 | 36,327.70 |
| 26-Jun-20 | 700 | 13,220,504 | 0.0 | 36,327.70 |

NOTES:

LNAPL: Light Non-Aqueous Phase Liquid

The system was operational for the reporting period with the following exceptions:

On March 18, the system was temporarily out of service during a power outage at Marcus Hook Tank Farm.

On March 26, the pumps in RW-111, RW-119, and RW-121 were inoperable. These pumps were cleaned and returned to service.

On April 2, the pump in RW-111 was removed for maintenance. On April 30, the pump was reinstalled in RW-111 and returned to service.

On June 26, the system was temporarily out of service while the LNAPL holding tank was emptied.